

[4910-13-P]

### DEPARTMENT OF TRANSPORTATION

**Federal Aviation Administration** 

**14 CFR Part 39** 

[Docket No. FAA-2017-1175; Product Identifier 2017-NM-087-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc., Airplanes

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. This proposed AD was prompted by a report that Belleville washers installed on the shimmy damper of the main landing gear may fail due to fatigue. This proposed AD would require revising the maintenance or inspection program, as applicable, to incorporate a repetitive task specified in the maintenance review board report. We are proposing this AD to address the unsafe condition on these products.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

• Federal eRulemaking Portal: Go to http://www.regulations.gov. Follow the instructions for submitting comments.

- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West
   Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC
   20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Bombardier, Inc., 400 Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer Response Center North America toll-free telephone 1-866-538-1247 or direct-dial telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com; Internet http://www.bombardier.com. You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1175; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section.

Include "Docket No. FAA-2017-1175; Product Identifier 2017-NM-087-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM based on those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

### **Discussion**

Transport Canada Civil Aviation, which is the aviation authority for Canada, has issued Canadian AD CF-2017-14, dated April 21, 2017 (referred to after this as the Mandatory Continuing Airworthiness Information, or "the MCAI"), to correct an unsafe condition for all Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model

CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes. The MCAI states:

It has been found that Belleville washers installed on the Main Landing Gear (MLG) Shimmy Damper may fail in fatigue. A failed washer segment migrating into the piston cavity may interfere with piston travel. As a result, shimmy damper performance would be compromised, MLG shimmy could occur and potentially lead to a MLG failure.

As a result of this investigation, a restoration task has been added for Belleville washers' replacement at 20,000 flight cycles, during MLG overhaul. For aeroplanes that have passed the 20,000 flight cycle threshold, a phase-in period is defined.

This [Canadian] AD is issued to mandate the Maintenance Review Board (MRB) revised task for the affected aeroplanes models.

You may examine the MCAI in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1175.

### Related Service Information under 1 CFR part 51

Bombardier, Inc., has issued task number 320100-229, Restoration (Belleville Washing Replacement) of the MLG Shimmy Damper, of the Maintenance Review Board Report of the Bombardier CRJ700/705/900/1000 Maintenance Requirements Manual (MRM) – Part 1, CSP B-053, Revision 17, dated June 25, 2017. This service information describes the restoration (Belleville Washer Replacement) of the MLG shimmy damper. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## FAA's Determination and Requirements of this Proposed AD

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

This AD requires revisions to certain operator maintenance documents to include new actions (e.g., inspections). Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (j) of this proposed AD. The request should include a description of changes to the required actions that will ensure the continued damage tolerance of the affected structure.

### **Costs of Compliance**

We estimate that this proposed AD affects 544 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

### **Estimated costs**

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Revise the airplane maintenance or inspection program	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$46,240

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the

Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

# **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- 1. Is not a "significant regulatory action" under Executive Order 12866;
- 2. Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
  - 3. Will not affect intrastate aviation in Alaska; and
- 4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

# **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

### PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

# § 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**Bombardier, Inc., Airplanes:** Docket No. FAA-2017-1175; Product Identifier 2017-NM-087-AD.

## (a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

### (b) Affected ADs

None.

### (c) Applicability

This AD applies to all Bombardier, Inc., Model CL-600-2C10 (Regional Jet Series 700, 701, & 702) airplanes, Model CL-600-2D15 (Regional Jet Series 705) airplanes, Model CL-600-2D24 (Regional Jet Series 900) airplanes, and Model CL-600-2E25 (Regional Jet Series 1000) airplanes, certificated in any category.

## (d) Subject

Air Transport Association (ATA) of America Code 32, Landing gear.

# (e) Reason

This AD was prompted by a report indicating that Belleville washers installed on the shimmy damper of the main landing gear (MLG) may fail due to fatigue. We are issuing this AD to prevent a failed washer segment migrating into the piston cavity and interfering with piston travel. As a result, the shimmy damper performance could be compromised, and an MLG shimmy could occur, potentially leading to an MLG failure and affecting the airplane's safe flight and landing.

## (f) Compliance

Comply with this AD within the compliance times specified, unless already done.

## (g) Maintenance or Inspection Program Revision

Within 30 days after the effective date of this AD, revise the airplane maintenance or inspection program, as applicable, by incorporating maintenance review board (MRB) report task number 320100-229, Restoration (Belleville Washing Replacement) of the MLG Shimmy Damper, of the Maintenance Review Board Report of the Bombardier CRJ700/705/900/1000 Maintenance Requirements Manual (MRM) – Part 1, CSP B-053, Revision 17, dated June 25, 2017. The initial compliance time for MRB report task number 320100-229 is specified in paragraphs (g)(1) and (g)(2) of this AD, as applicable.

- (1) For any shimmy damper with 20,000 total accumulated flight cycles or fewer as of the effective date of this AD, the initial compliance time is before the accumulation of 26,000 total flight cycles.
- (2) For any shimmy damper with 20,000 total accumulated flight cycles or more as of the effective date of this AD, the initial compliance time is specified in paragraph (g)(2)(i) or (g)(2)(ii), whichever occurs later.
- (i) Within 6,000 flight cycles after the effective date of this AD, but prior to the accumulation of 30,000 total flight cycles.

(ii) Within 30 days after effective date of this AD.

## (h) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Bombardier Temporary Revision MRB-0070, dated October 20, 2015, prior to the effective date of this AD.

### (i) No Alternative Actions or Intervals

After the airplane maintenance or inspection program has been revised, as required by paragraph (g) of this AD, no alternative actions (e.g., inspections) or intervals may be used unless the actions and/or intervals are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

## (j) Other FAA AD Provisions

The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your

appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(2) Contacting the Manufacturer: For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, New York ACO Branch, FAA; or Transport Canada Civil Aviation (TCCA); or Bombardier Inc.'s TCCA Design Approval Organization (DAO). If approved by the DAO, the approval must include the DAO-authorized signature.

## (k) Related Information

- (1) Refer to Mandatory Continuing Airworthiness Information (MCAI) Canadian Airworthiness Directive CF-2017-14, dated April 21, 2017, for related information. This MCAI may be found in the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1175.
- (2) For more information about this AD, contact Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Section, FAA, New York ACO Branch, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; telephone 516-228-7318; fax 516-794-5531.

(3) For service information identified in this AD, contact Bombardier, Inc., 400

Côte-Vertu Road West, Dorval, Québec H4S 1Y9, Canada; Widebody Customer

Response Center North America toll-free telephone 1-866-538-1247 or direct-dial

telephone 1-514-855-2999; fax 514-855-7401; email ac.yul@aero.bombardier.com;

Internet http://www.bombardier.com. You may view this service information at the FAA,

Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on

the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 14, 2017.

Jeffrey E. Duven,

Director,

System Oversight Division,

Aircraft Certification Service.

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